Docket File

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

July 10, 1990

Docket Nos. 50-361
and 50-362

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Gentlemen:

SUBJECT: ISSUANCE OF AMENDMENT NO.89 TO FACILITY OPERATING LICENSE NO. NPF-10 AND AMENDMENT NO. 79 TO FACILITY OPERATING LICENSE NO. NPF-15 SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NOS. 2 AND 3 (TAC NOS. 74586 AND 74587)

The Commission has issued the enclosed amendments to Facility Operating Licenses NPF-10 and NPF-15 for San Onofre Nuclear Generating Station, Unit Nos. 2 and 3, respectively. The amendments consist of changes to the Technical Specifications in response to your applications dated August 18, 1989 (PCN 230) as supplemented May 31, 1990.

The amendments establish a new Technical Specification (TS) 3/4.7.1.6 regarding atmospheric dump valves (ADVs). The proposed TS establishes the limiting conditions for operation, associated action statements, surveillance requirements and bases for the atmosphere dump valves. The proposed TS requires that the ADVs be operable in Modes 1, 2, 3, and in Mode 4 when the steam generators are being used for decay heat removal. The affected index pages have also been revised and are enclosed. While you did not specifically ask for these changes, the revision of these pages are considered administrative in nature and do not involve any significant safety issues.

Finally, as a result of the spent fuel pool reracking amendments (Amendment Nos. 87 and 77 to the San Onofre Units 2 and 3 Technical Specifications respectively), the appropriate index pages for each unit's Technical Specifications have been revised. Revised index pages VIII, XIV, and XXI for Unit 2 and revised index pages VIII, XII, XVII, and XVIIa for Unit 3, as well as any necessary overleaf pages, are enclosed. While you did not specifically ask for these changes, the revision of these pages are considered administrative in nature and do not involve any significant safety issues.

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A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

/s/
Lawrence E. Kokajko, Project Manager
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 89 to License No. NPF-10
2. Amendment No. 79 to License No. NPF-15
3. Safety Evaluation

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A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

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Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 89 to License No. NPF-10
2. Amendment No. 79 to License No. NPF-15
3. Safety Evaluation

cc w/enclosures:
See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-361

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 89
License No. NPF-10

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The applications for amendment to the license for San Onofre Nuclear Generating Station, Unit 2 (the facility) filed by Southern California Edison Company (SCE) on behalf of itself and San Diego Gas and Electric Company, the City of Riverside, California and the City of Anaheim, California (licensees) dated August 18, 1989 and supplemented May 31, 1990 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-10 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 89 , are hereby incorporated in the license. SCE shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and must be fully implemented no later than 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Charles M. Trammell

for John T. Larkins, Acting Director
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 10, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 89

FACILITY OPERATING LICENSE NO. NPF-10

DOCKET NO. 50-361

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change. Also enclosed are the following overleaf pages to the amended pages.

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B 3/4 7-3a	-
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ATMOSPHERIC DUMP VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.6 The atmospheric dump valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4*.

ACTION:

a. With an atmospheric dump valve inoperable, restore the valve to OPERABLE status within 72 hours, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN and on shutdown cooling within the next 12 hours.

b. With both atmospheric dump valves inoperable, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN and on shutdown cooling within the next 12 hours.

c. With the backup nitrogen gas system capacity less than 8 hours, restore the backup nitrogen gas system capacity within 72 hours or declare the ADV inoperable.

d. The provisions of Specification 3.0.4 are not applicable for MODES 2, 3, and 4* with only one atmospheric dump valve inoperable.

SURVEILLANCE REQUIREMENTS

4.7.1.6.1 Each atmospheric dump valve shall be determined OPERABLE at least once per REFUELING INTERVAL by:

a. Verifying that each atmospheric dump valve will open in modulate mode using the backup nitrogen system,

b. Verifying that each atmospheric dump valve will close to its isolation position upon a MSIS test signal,

c. Verifying that each atmospheric dump valve will open in modulate/override mode with a MSIS test signal present, and

d. Verifying that local manual operation will fully open and close each atmospheric dump valve.

4.7.1.6.2 Verify at least once per 7 days that the backup nitrogen gas system capacity will provide a minimum of 8 hours of pneumatic operation for each atmospheric dump valve.

4.7.1.6.3 The atmospheric dump valves shall be determined OPERABLE as required per Specification 4.0.5.

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*When steam generators are being used for decay heat removal.

3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

LIMITING CONDITION FOR OPERATION

3.7.2 The temperatures of both the primary and secondary coolants in the steam generators shall be greater than 70°F when the pressure of either coolant in the steam generator is greater than 200 psig.

APPLICABILITY: At all times.

ACTION:

With the requirements of the above specification not satisfied:

a. Reduce the steam generator pressure of the applicable side to less than or equal to 200 psig within 30 minutes, and

b. Perform an engineering evaluation to determine the effect of the overpressurization on the structural integrity of the steam generator. Determine that the steam generator remains acceptable for continued operation prior to increasing its temperatures above 200°F.

SURVEILLANCE REQUIREMENTS

4.7.2 The pressure in each side of the steam generators shall be determined to be less than 200 psig at least once per hour when the temperature of either the primary or secondary coolant is less than 70°F.

3/4.7.1.4 ACTIVITY

The limitations on secondary system specific activity ensure that the resultant offsite radiation dose will be limited to a small fraction of 10 CFR Part 100 limits in the event of a steam line rupture. This dose also includes the effects of a coincident 1.0 GPM primary to secondary tube leak in the steam generator of the affected steam line and a concurrent loss of offsite electrical power. These values are consistent with the assumptions used in the accident analyses.

3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVE

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blowdown in the event of a steam line rupture. This restriction is required to 1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and 2) limit the pressure rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam isolation valves within the closure times of the surveillance requirements are consistent with the assumptions used in the accident analyses.

3/4.7.1.6 ATMOSPHERIC DUMP VALVES

The Atmospheric Dump Valves (ADVs) provide a safety grade method for cooling the plant to the shutdown cooling entry conditions should the preferred heat sink via the Steam Bypass System to the condenser not be available. This is done in conjunction with the Auxiliary Feedwater System providing a safety grade source of cooling water from the condensate storage tanks. The ADVs are equipped with pneumatic controllers to permit control of the cooldown rate. The controllers provide both automatic and manual ADV operating modes.

The ADVs are used during normal plant startups and cooldowns when either a vacuum in the condenser or the Steam Bypass Control System is not available. The ADVs are capable of being operated remotely from either the Control Room or the Remote Shutdown Panel (L-042), and locally with manual handwheels. However, controlling the ADVs from the Remote Shutdown Panel is not credited in the Safety Analyses. Operating the ADVs during design bases events from the Remote Shutdown Panel is not a criteria for determining ADV operability.

Two ADVs are provided to meet single failure assumptions following an event rendering one steam generator unavailable for Reactor Coolant System (RCS) heat removal. In the accident analysis, the ADVs are not assumed to be used until the operator takes action to cool down the plant. This is typically 30 minutes following initiation of an event. The limiting events are those which render one steam generator unavailable for RCS heat removal, with a coincident loss of offsite power. Typical initiating events falling into this category are a main steam line break (MSLB) upstream of the main steam isolation valves, a feedwater line break (FWLB), and a steam generator tube rupture (SGTR) event.

3/4.7.1.6 ATMOSPHERIC DUMP VALVES (Continued)

At least one ADV is required to conduct a plant cooldown following an event in which one steam generator and the condenser become unavailable. Failure to meet the LCO can result in the inability to cool the plant to shutdown cooling entry conditions following an event in which the condenser is unavailable for use with the Steam Bypass System. The ADVs are required to be OPERABLE whenever the steam generators are being used for RCS heat removal. In these MODES they provide the safety grade path for cooling the RCS to shutdown cooling entry conditions.

The ADVs are normally operated from the plant non-safety instrument air supply. A Seismic Category I Pressurized Gas Supply, which consists of bottled nitrogen, is provided to the ADVs on loss of instrument air. The bottled nitrogen pressure is read locally, and it is not alarmed in the control room. The backup nitrogen capacity surveillance 4.7.1.6.2 requires a minimum accumulator pressure of 1050 psig. This pressure includes allowances for seven days worth of leakage and uncertainty in the nitrogen consupmtion rates. The value represents enough backup nitrogen gas for each ADV to have at least 8 hours of pneumatic operation. This is based on the time needed to reach shutdown cooling (SDC) conditions during a small break loss-of-coolant accident. This is consistent and conservative relative to the Units 2 and 3 Emergency Operating Instructions.

The ADVs are one of the systems required to meet Branch Technical Position (BTP) RSB 5-1, Design Requirements of the Residual Heat Removal System, and 10 CFR 50, Appendix R for taking the plant from normal operating conditions to cold shutdown. Units 2 and 3 have both met the requirements for Class 2 plants under BTP RSB 5-1 using two ADVs. For the RSB 5-1 scenario, 8 hours of backup nitrogen for each ADV is sufficient for cooling down to SDC conditions without a 4-hour hold. For either longer term cooldowns, or for shutdown from outside the Control Room where the ADVs would be required, the local manual operating capability can be used. The February 24, 1988, NRC letter on the "Safety Evaluation of the Natural Circulation Cooldown Tests at SONGS Units 2 and 3," acknowledges in Paragraph g:

> "That the atmospheric dump valves could be manually operated in the event the nitrogen supply to these valves should become depleted."

Surveillance of the ADVs using the nitrogen backup capability and the 7-day minimum backup nitrogen pressure surveillance requirement provides adequate assurance that the ADVs and the nitrogen backup system remain operable. In addition, handwheels are provided for local manual operation for each ADV. This redundancy ensures that the Reactor Coolant System can be cooled down such that the Shutdown Cooling System can be placed in service.

To perform a controlled cooldown of the RCS, the ADVs must be able to be opened and throttled through their full opening range from either the Control Room or the local handwheel. The surveillance requirements ensure that the ADVs are tested through a full control cycle at least once per fuel cycle. As the ADVs are subject to inservice testing per Surveillance 4.7.1.6.3, the frequency of Surveillance 4.7.1.6.1 is based on the length of a fuel cycle.

3/4.7.1.6 ATMOSPHERIC DUMP VALVES (Continued)

The provisions of Specification 3.0.4 in MODES 2, 3, and 4 do not apply when only one ADV is inoperable, and the ADV can be made OPERABLE within the allowed action times. However, with two inoperable ADVs the plant must be placed on shutdown cooling. Therefore, the provisions of Specification 3.0.4 do apply with two inoperable ADVS.

3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

The limitation on steam generator pressure and temperature ensures that the pressure induced stresses in the steam generators do not exceed the maximum allowable fracture toughness stress limits. The limitations of 70°F and 200 psig are based on a steam generator RT_{NDT} of 30°F and are sufficient to prevent brittle fracture.

3/4.7.3 COMPONENT COOLING WATER SYSTEM

The OPERABILITY of the component cooling water system ensures that sufficient cooling capacity is available for continued operation of safety related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the accident analyses.

3/4.7.4 SALT WATER COOLING SYSTEM

The OPERABILITY of the salt water cooling system ensures that sufficient cooling capacity is available for continued operation of equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the accident analyses.

3/4.7.5 CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM

The OPERABILITY of the control room emergency air cleanup system ensures that 1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system and 2) the control room will remain habitable for operations personnel during and following all credible accident conditions. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix A, 10 CFR 50.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-362

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 79
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The applications for amendment to the license for San Onofre Nuclear Generating Station, Unit 3 (the facility) filed by Southern California Edison Company (SCE) on behalf of itself and San Diego Gas and Electric Company, the City of Riverside, California and the City of Anaheim, California (licensees) dated August 18, 1989 and supplemented May 31, 1990 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-15 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 79 , are hereby incorporated in the license. SCE shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and must be fully implemented no later than 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Charles M. Trammell
for John T. Larkins, Acting Director
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 10, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 79

FACILITY OPERATING LICENSE NO. NPF-15

DOCKET NO. 50-362

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change. Also enclosed are the following overleaf pages to the amended pages.

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VI	V
XI	XII
3/4 7-10a	-
B 3/4 7-3	-
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ATMOSPHERIC DUMP VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.6 The atmospheric dump valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4*.

ACTION:

a. With an atmospheric dump valve inoperable, restore the valve to OPERABLE status within 72 hours, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN and on shutdown cooling within the next 12 hours.

b. With both atmospheric dump valves inoperable, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN and on shutdown cooling within the next 12 hours.

c. With the backup nitrogen gas system capacity less than 8 hours, restore the backup nitrogen gas system capacity within 72 hours or declare the ADV inoperable.

d. The provisions of Specification 3.0.4 are not applicable for MODES 2, 3, and 4* with only one atmospheric dump valve inoperable.

SURVEILLANCE REQUIREMENTS

4.7.1.6.1 Each atmospheric dump valve shall be determined OPERABLE at least once per REFUELING INTERVAL by:

a. Verifying that each atmospheric dump valve will open in modulate mode using the backup nitrogen system,

b. Verifying that each atmospheric dump valve will close to its isolation position upon a MSIS test signal,

c. Verifying that each atmospheric dump valve will open in modulate/override mode with a MSIS test signal present, and

d. Verifying that local manual operation will fully open and close each atmospheric dump valve.

4.7.1.6.2 Verify at least once per 7 days that the backup nitrogen gas system capacity will provide a minimum of 8 hours of pneumatic operation for each atmospheric dump valve.

4.7.1.6.3 The atmospheric dump valves shall be determined OPERABLE as required per Specification 4.0.5.

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*When steam generators are being used for decay heat removal.

3/4.7.1.4 ACTIVITY

The limitations on secondary system specific activity ensure that the resultant offsite radiation dose will be limited to a small fraction of 10 CFR Part 100 limits in the event of a steam line rupture. This dose also includes the effects of a coincident 1.0 gpm primary to secondary tube leak in the steam generator of the affected steam line and a concurrent loss of offsite electrical power. These values are consistent with the assumptions used in the accident analyses.

3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVE

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blow down in the event of a steam line rupture. This restriction is required to 1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and 2) limit the pressure rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam isolation valves within the closure times of the surveillance requirements is consistent with the assumptions used in the accident analyses.

3/4.7.1.6 ATMOSPHERIC DUMP VALVES

The Atmospheric Dump Valves (ADVs) provide a safety grade method for cooling the plant to the shutdown cooling entry conditions should the preferred heat sink via the Steam Bypass System to the condenser not be available. This is done in conjunction with the Auxiliary Feedwater System providing a safety grade source of cooling water from the condensate storage tanks. The ADVs are equipped with pneumatic controllers to permit control of the cooldown rate. The controllers provide both automatic and manual ADV operating modes.

The ADVs are used during normal plant startups and cooldowns when either a vacuum in the condenser or the Steam Bypass Control System is not available. The ADVs are capable of being operated remotely from either the Control Room or the Remote Shutdown Panel (L-042), and locally with manual handwheels. However, controlling the ADVs from the Remote Shutdown Panel is not credited in the Safety Analyses. Operating the ADVs during design bases events from the Remote Shutdown Panel is not a criteria for determining ADV operability.

Two ADVs are provided to meet single failure assumptions following an event rendering one steam generator unavailable for Reactor Coolant System (RCS) heat removal. In the accident analysis, the ADVs are not assumed to be used until the operator takes action to cool down the plant. This is typically 30 minutes following initiation of an event. The limiting events are those which render one steam generator unavailable for RCS heat removal, with a coincident loss of offsite power. Typical initiating events falling into this category are a main steam line break (MSLB) upstream of the main steam isolation valves, a feedwater line break (FWLB), and a steam generator tube rupture (SGTR) event.

3/4.7.1.6 ATMOSPHERIC DUMP VALVES (Continued)

At least one ADV is required to conduct a plant cooldown following an event in which one steam generator and the condenser become unavailable. Failure to meet the LCO can result in the inability to cool the plant to shutdown cooling entry conditions following an event in which the condenser is unavailable for use with the Steam Bypass System. The ADVs are required to be OPERABLE whenever the steam generators are being used for RCS heat removal. In these MODES they provide the safety grade path for cooling the RCS to shutdown cooling entry conditions.

The ADVs are normally operated from the plant non-safety instrument air supply. A Seismic Category I Pressurized Gas Supply, which consists of bottled nitrogen, is provided to the ADVs on loss of instrument air. The bottled nitrogen pressure is read locally, and it is not alarmed in the control room. The backup nitrogen capacity surveillance 4.7.1.6.2 requires a minimum accumulator pressure of 1050 psig. This pressure includes allowances for seven days worth of leakage and uncertainty in the nitrogen consupmtion rates. The value represents enough backup nitrogen gas for each ADV to have at least 8 hours of pneumatic operation. This is based on the time needed to reach shutdown cooling (SDC) conditions during a small break loss-of-coolant accident. This is consistent and conservative relative to the Units 2 and 3 Emergency Operating Instructions.

The ADVs are one of the systems required to meet Branch Technical Position (BTP) RSB 5-1, Design Requirements of the Residual Heat Removal System, and 10 CFR 50, Appendix R for taking the plant from normal operating conditions to cold shutdown. Units 2 and 3 have both met the requirements for Class 2 plants under BTP RSB 5-1 using two ADVs. For the RSB 5-1 scenario, 8 hours of backup nitrogen for each ADV is sufficient for cooling down to SDC conditions without a 4-hour hold. For either longer term cooldowns, or for shutdown from outside the Control Room where the ADVs would be required, the local manual operating capability can be used. The February 24, 1988, NRC letter on the "Safety Evaluation of the Natural Circulation Cooldown Tests at SONGS Units 2 and 3," acknowledges in Paragraph g:

> "That the atmospheric dump valves could be manually operated in the event the nitrogen supply to these valves should become depleted."

Surveillance of the ADVs using the nitrogen backup capability and the 7-day minimum backup nitrogen pressure surveillance requirement provides adequate assurance that the ADVs and the nitrogen backup system remain operable. In addition, handwheels are provided for local manual operation for each ADV. This redundancy ensures that the Reactor Coolant System can be cooled down such that the Shutdown Cooling System can be placed in service.

To perform a controlled cooldown of the RCS, the ADVs must be able to be opened and throttled through their full opening range from either the Control Room or the local handwheel. The surveillance requirements ensure that the ADVs are tested through a full control cycle at least once per fuel cycle. As

3/4.7.1.6 ATMOSPHERIC DUMP VALVES (Continued)

the ADVs are subject to inservice testing per Surveillance 4.7.1.6.3, the frequency of Surveillance 4.7.1.6.1 is based on the length of a fuel cycle.

The provisions of Specification 3.0.4 in MODES 2, 3, and 4 do not apply when only one ADV is inoperable, and the ADV can be made OPERABLE within the allowed action times. However, with two inoperable ADVs the plant must be placed on shutdown cooling. Therefore, the provisions of Specification 3.0.4 do apply with two inoperable ADVS.

3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

The limitation on steam generator pressure and temperature ensures that the pressure-induced stresses in the steam generators do not exceed the maximum allowable fracture toughness stress limits. The limitations of 70°F and 200 psig are based on a steam generator RT_{NDT} of 30°F and are sufficient to prevent brittle fracture.

3/4.7.3 COMPONENT COOLING WATER SYSTEM

The OPERABILITY of the component cooling water system ensures that sufficient cooling capacity is available for continued operation of safety related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the accident analyses.

3/4.7.4 SALT WATER COOLING SYSTEM

The OPERABILITY of the salt water cooling system ensures that sufficient cooling capacity is available for continued operation of equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the accident analyses.

3/4.7.5 CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM

The OPERABILITY of the control room emergency air cleanup system ensures that 1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system and 2) the control room will remain habitable for operations personnel during and following all credible accident conditions. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 of Appendix A, 10 CFR 50.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 89 TO FACILITY OPERATING LICENSE NO. NPF-10

AND AMENDMENT NO. 79 TO FACILITY OPERATING LICENSE NO. NPF-15

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NOS. 2 AND 3

DOCKET NOS. 50-361 AND 50-362

1.0 INTRODUCTION

By letter dated August 18, 1989, Southern California Edison Company, et al., (SCE or the licensee) requested changes to the Technical Specifications for Facility Operating License Nos. NPF-10 and NPF-15 that authorize operation of San Onofre Nuclear Generating Station Unit Nos. 2 and 3 (SONGS 2/3) in San Diego County, California. The licensee has proposed to add Technical Specification (TS) 3/4.7.1.6, "Atmospheric Dump Valves," (ADV) which documents the operability and surveillance requirements for the ADVs. The Technical Specification fulfills the licensee's commitment to establish an ADV Technical Specification. The proposed TS would establish the limiting conditions for operation (LCO), associated action statements, surveillance requirements, and bases for the ADVs.

Based upon the staff's review of the August 18, 1989 submittal, the staff had several telephone discussions with the licensee regarding the amendment application. Specifically, the staff requested modifications to the amendment package in regard to the remote operating capability and the surveillance requirements of the ADVs. On May 31, 1990, the licensee supplemented the original submittal which addressed the concerns of the staff. The additional submittal did not affect the proposed no significant hazards consideration determination as previously noticed.

2.0 EVALUATION

The atmospheric dump valves provide a safety grade method for cooling the plant to the shutdown cooling entry condition in the event that the preferred heat sink via the steam bypass system is not available. They may also be utilized during normal plant startup and cooldowns when either a vacuum in the condenser or the steam bypass control system is not available. The

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ADVs are equipped with pneumatic controllers to permit control of the cooldown rate, and are capable of being operated remotely from the control room, and locally with manual handwheels.

Two ADVs are provided to meet single failure assumptions following an event that renders one steam generator unavailable for reactor coolant system (RCS) heat removal. The ADVs are not assumed to be used until the operator takes action to cool down the plant, generally 30 minutes following event initiation. Postulated events that could render one steam generator unavailable for RCS heat removal are main steam line break, feedwater line break, and a steam generator tube rupture. To conduct a plant cooldown following such an event, at least one ADV must remain available. Failure to meet the LCO could result in the inability to cool the plant to shutdown cooling entry conditions following an event in which the condenser is unavailable for use with the steam bypass system.

The proposed TS establishes the requirements for ensuring the reliability of the ADVs, in order to secure a controlled cooldown over a wide range of transients and that the ADVs close upon actuation of main steam isolation signal (MSIS). The proposed TS requires that the ADVs be operable at all times in Modes 1, 2, 3 and in Mode 4 when the steam generators are being used for decay heat removal. If any one of the ADVs becomes inoperable, an action would then be taken to restore it to operable status within 72 hours. If the inoperable ADV cannot be restored within the specified time period, or if both ADVs are inoperable, the plant will be placed in at least hot standby within the next 6 hours and in hot shutdown and on shutdown cooling within the next 12 hours. If the backup nitrogen gas system capacity is less than 8 hours, the capacity must be restored within 72 hours or the ADV will be declared inoperable. With one ADV inoperable in Modes 2, 3 or 4 (when steam generators are being used for decay heat removal), the provisions of TS 3.0.4 are not applicable.

Since the ADVs are subject to inservice testing, the frequency of the TS surveillances is based on the length of a fuel cycle. The TS will require that both ADVs be demonstrated operable at least once per refueling interval. In order to perform a controlled cooldown of RCS, the ADVs must be able to be opened and throttled through their full opening from either the control room or the local handwheel. The surveillance requirements will verify that the ADVs will open in modulate mode using the backup nitrogen supply system. With a MSIS test signal present, the ADVs will be verified to actuate to their isolation position, and that they will open in modulate/override mode. Additionally, both ADVs will be demonstrated operable with operation of the valves locally. This redundancy ensures the reactor coolant system can be cooled down such that the shutdown cooling can be placed in service. The operability and surveillance requirements will ensure that the ADVs are tested through a full control cycle at least once per fuel cycle.

The ADVs are operated from the unit's instrument air system. However, nitrogen can be supplied to the ADVs by a seismic Category I pressurized gas supply in case instrument air is unavailable. The backup nitrogen capacity is controlled to a minimum accumulator pressure of 1050 psig, which includes allowances for seven days worth of leakage and uncertainty in the nitrogen consumption rates. This pressure represents enough backup nitrogen capacity for a minimum of 8 hours of pneumatic ADV operation. This is based on the time needed to reach shutdown cooling condition during a small break loss of coolant accident and is consistent relative to the emergency operating procedures.

The proposed TS addition is consistent with the Branch Technical Position (BTP) RSB 5-1, "Design Requirements of the Residual Heat Removal System"; 10 CFR 50, Appendix R; and Section 5.4.7 of the Standard Review Plan, NUREG-800, "Residual Heat Removal (RHR) System." SONGS 2/3 have both met the requirements for Class 2 plants under BTP RSB 5-1, as indicated in the February 24, 1988 NRC letter forwarding the safety evaluation of the natural circulation cooldown tests at SONGS 2/3. Local manual operating capability can be relied upon for longer term cooldowns or for shutdown from outside the control room, where the ADVs would be required. The safety evaluation states in paragraph g; "That the atmospheric dump valves could be manually operated in the event the nitrogen supply to these valves should become depleted." Therefore, if instrument air and nitrogen supply were lost, the ADVs could be manually operated.

Therefore, based upon the information presented, the staff concludes that the proposed addition to the Technical Specifications regarding the ADVs is acceptable.

3.0 CONTACT WITH STATE OFFICIAL

The NRC staff has advised the State of California of the proposed determination of no significant hazards consideration. No comments were received.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments involve changes in requirements with respect to the installation or use of a facility component located within the restricted areas as defined in 10 CFR Part 20 and changes in surveillance requirements. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: July 10, 1990